

**PATENT**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



In the **PATENT APPLICATION** of:

De et al.

**Application No.:** 10/079,334

**Confirmation No.:** 1399

**Filed:** February 20, 2002

**For:** FAST JOINT DETECTION USER  
EQUIPMENT

**Group:** 2611

**Examiner:** Jason Perilla

Our File: I-2-188.2US

Date: April 3, 2007

**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT**

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Further to Applicants' Duty of Disclosure pursuant to 37 C.F.R. §1.56, Applicants wish to bring to the Examiner's attention the material cited on the enclosed Form PTO-1449.

The listed references include references previously cited in this application.

Newly cited documents are indicated by an asterisk (\*) on the enclosed Form PTO-1449. Copies of the newly cited documents are enclosed. Pursuant to 37 C.F.R. §1.98(a)(2)(ii), copies of the newly cited U.S. publications and patent documents have not been included.

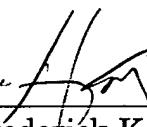
**Applicant: De et al.  
Application No.: 10/079,334**

This Supplemental Information Disclosure Statement is being filed with the fee required by 37 C.F.R. § 1.17(p).

It is respectfully requested that the Examiner consider these documents and return an initialed copy of the Form PTO-1449 indicating his consideration of the cited materials.

Respectfully submitted,

De et al.

By   
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CFK/ci  
Enclosures

<p style="text-align: center;">U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)</p>			ATTY. DOCKET NO. I-2-0188.2US		SERIAL NO. 10/079,334		
			APPLICANT De et al.				
			FILING DATE February 20, 2002		GROUP 2611		
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		6,144,711	11/2000	Raleigh et al.			
		6,208,295	03/2001	Dogan et al.			
		6,252,540	06/2001	Hale et al.			
		6,370,129	04/2002	Huang			
*		6,424,596	07/2002	Donald			
*		6,952,460	10/2005	Van Wechel et al.			
*		2002/0146078	10/2002	Gorokhov et al.			
*		2003/0021335	01/2003	De et al.			
*		2003/0026325	02/2003	De et al.			
*		2004/0136316	07/2004	Kwak et al.			
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
							YES
		99/40698	08/1999	WO			
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
		Klein et al., "Zero Forcing and Minimum Mean-Square-Error Equalization for Multiuser Detection in Code-Division Multiple-Access Channels," IEEE Transactions on Vehicular Technology, Vol. 45, No. 2, May 1996.					
		Klein, "Data Detection Algorithms Specially Designed for the Downlink of CDMA Mobile Radio Systems," IEEE 47 <sup>th</sup> Vehicular Technology Conference, Phoenix, Arizona, US, May 1997.					
		Karimi et al., "A Novel and Efficient Solution to Block-Based Joint-Detection Using Approximate Cholesky Factorization," Motorola GSM Products Division, Swindon, UK, 1998.					

EXAMINER	DATE CONSIDERED
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EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



FORM 10-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)		ATTY. DOCKET NO. I-2-0188.2US	SERIAL NO. 10/079,334
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)			
		PA Consulting Group/Racal Instruments Ltd., "Low Cost MMSE-BLE-SD Algorithm for UTRA TDD Mode Downlink," ETSI STC SMG2 Layer 1 Expert Group, Helsinki, Finland, September 1998.	
		Klein et al., "Linear Unbiased Data Estimation in Mobile Radio Systems Applying CDMA," IEEE Journal on Selected Areas in Communications, Vol. 11, No. 7, September 1993.	
		Benventuto et al., "Joint Detection with Low Computational Complexity for Hybrid TD-CDMA Systems," Vehicular Technology Conference, 1999, VTC IEEE VTS 50 <sup>th</sup> , Amsterdam, The Netherlands, September 1999.	
		Das et al., "Computationally Efficient Multiuser Detectors," <u>Personal, Indoor and Mobile Radio Communications, 1997</u> , The 8 <sup>th</sup> Annual IEEE International Symposium on Helsinki, Finland, September 1997.	
		Lee et al., "A Fast Computation Algorithm for the Decision Feedback Equalizer," IEEE Transactions on Communications, Vol. 43, No. 11, November 1999.	
*		Vollmer et al., "Comparative Study of Joint-Detection Techniques for TD-CDMA Based Mobile Radio Systems", IEEE Journal on Selected Areas in Communications, IEEE, Vol. 19, No. 8, August 2001, pp. 1461-1475.	
*		Pan et al., "Low Complexity Data Detection Using Fast Fourier Transform Decomposition of Channel Correlation Matrix", 2001 IEEE Global Telecommunications Conference, Vol. 2 of 6, November 2001, pp. 1322-1326.	
*		3G TS 25.221 V3.2.0, 2000-03, "ULTRA (TDD) physical channels and mapping of transport channels onto physical channels," 3 <sup>rd</sup> Generation Partnership Project, Technical Specification Group RAN WG1. ( <a href="http://www.3gpp.org">www.3gpp.org</a> ).	
*		3G TS 25.221 V4.0.0, 2001-03, "ULTRA (TDD) physical channels and mapping of transport channels onto physical channels," 3 <sup>rd</sup> Generation Partnership Project, Technical Specification Group RAN WG1. ( <a href="http://www.3gpp.org">www.3gpp.org</a> ).	
*		3G TS 25.221 V4.2.0, 2001-09, "ULTRA (TDD) physical channels and mapping of transport channels onto physical channels," 3 <sup>rd</sup> Generation Partnership Project, Technical Specification Group RAN WG1. ( <a href="http://www.3gpp.org">www.3gpp.org</a> ).	
*		J. Blanz, A. Klein, M. NaBhan, and A. Steil, "Performance of a cellular hybrid C/TDMA mobile radio system applying joint detection and coherent receiver antenna diversity," IEEE. J. Select. Areas Commun., Vol. 12, pp. 568-579, May 1994.	

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)			
	*	G.K. Kaleh, "Channel equalization for block transmission systems," IEEE J. Select. Areas Commun., Vol. 13, pp. 110-120, Jan. 1995.	
	*	P. Jung and J. Blanz, "Joint detection with coherent receiver antenna diversity in CDMA mobile radio systems," IEEE Trans. Veh. Technol., Vol. 44, pp. 76-88, Feb. 1995.	
	*	N. Benvenuto and G. Sostrato, "Joint detection with low computational complexity for hybrid TD-CDMA systems," IEEE J. Select. Areas Commun., Vol. 19, pp. 245-253, Jan. 2001	
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